ATOMIC ENERGY newsletter®

A SERVICE FOR INDUSTRY BUSINESS ENGINEERING AND RESEARCH
ROBERT M. SHERMAN, EDITOR. PUBLISHED BI-WEEKLY BY ATOMIC ENERGY NEWS CO., 1000 SIXTH AVENUE, NEW YORK 18, N. Y.

Dear Sir:

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To accelerate development of a nuclear-powered rocket (project Rover), $11 million of USAEC funds for fiscal 1961 have been diverted to it from other projects the Commission told a recent hearing in Washington before the Joint Congressional Committee on Atomic Energy. Some $5 million in construction funds were added to Rover's budget by eliminating certain planned construction at USAEC nuclear weapon testing grounds; this gives Rover $13 million for construction purposes. An additional $3 million for Rover's operating funds came from monies originally allocated to the EURATOM-U.S. program, making $21 million now available to Rover for such purposes. (Other PROJECT ROVER NEWS, p. 3 this LETTER; Budget News, p. 2 this LETTER.)

Following competitive bidding by manufacturers of nuclear reactors in the U. S. and Great Britain, contract has been awarded Advanced Technology Laboratories division of American Radiator-Standard Sanitary Corp. to furnish the Australian Atomic Energy Commission a type UTR-10 nuclear research reactor. Advanced Technology, of Mountain View, Calif., will supply the reactor to the Commission's research establishment at Lucas Heights, N.S.W., with completion of the installation there planned for late Fall 1960. The UTR-10, a graphite-water moderated reactor using enriched uranium, and which operates at power levels up to 10 kilowatts, was supplied and placed in operation during 1959 at Virginia Polytechnic Institute, and Iowa State University. (Other BIDS ASKED, CONTRACTS AWARDED, p. 3 this LETTER.)

Nuclear fuel supply for Japan's first commercial nuclear power plant will be furnished by the U.K. Atomic Energy Authority to the Japan Atomic Power Company, under recent agreement made between the two. Deliveries of the fuel will start in 1963, about one year before the plant is scheduled to become operational at its site some sixty-five miles northwest of Tokyo. A Calder Hall-type nuclear power station, the complete 150,000 electrical kilowatt plant is being bought from British manufacturers. (Other Product NEWS, p. 2 this LETTER.)

Baird-Atomic, Inc., Cambridge, Mass. manufacturer and distributor of nuclear and optical instruments has acquired Axler Associates, Inc., Corona, L.I., New York. Axler produces optical interference filters and a line of infra red and ultra violet instruments for chemical analysis work. Davis R. Dewey, president of Baird-Atomic, said the Axler operation would be moved to the parent company's Cambridge plant in the near future. (Other FINANCIAL NEWS, p. 4 this LETTER.)

An agreement in principle that the Soviet Union will cooperate with India in the "peaceful uses of atomic energy including the design of nuclear power stations" has been formulated between the two nations, according to the Indian Government. A scientific delegation headed by Homi J. Bhabha, chairman of the Indian Atomic Energy Commission will visit the Soviet Union in May or June of this year. It follows the visit to India recently of a group led by V. S. Yemelyanov, head of the Soviet Administration for the Peaceful Uses of Atomic Energy. (Other BUSINESS NEWS, p. 2.)

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ATOMIC ENERGY BUSINESS NEWS...

CONSTRUCTION FUNDS FOR USAEC UNDER CONSIDERATION: Some $171,256,000 has been requested by the USAEC for new construction in fiscal 1961 in USAEC Authorization bill (H.R. 10656-S.3084) sent to Congress last fortnight. For the Power Demonstration Reactor Program (PDRP) $40 million was asked; for unsolicited power reactor proposals, $15 million; for the cooperative program with Canada in developing heavy water moderated power plants, $5 million; for increasing capacity of Shippingport plant, $4 million additional to the $5 million authorized last year; for the zero gradient synchrotron at Argonne National Laboratory, $15 million additional to the $25 million previously authorized.

Other items include $12 million for a high flux isotope reactor at Oak Ridge National Laboratory; $24 million for an advanced test reactor at Arco, Idaho national reactor testing station; $15 million for Project Pluto (nuclear ram jet engine); $4 million for facilities for support of biomedical research.

Allocations for nuclear weapons include $10 million for general production facilities; $2,100,000 for high-velocity test track at Sandia Base; $3 million for a special metals fabrication plant; $1,900,000 for the Tonopah Test Range in Nevada; and $2 million for radioactive waste plant at Los Alamos. For special nuclear materials $10 million is for general production facilities; $1,800,000 for billet production plant; $766,000 for laboratory building at Oak Ridge; $2,900,000 for plutonium reclamation plant at Hanford Works; and $2,500,000 for moderator purification improvements at Savannah River Plant.

For reactor development $7,500,000 was requested; for physical research, $7,500,000; for community projects, $715,000; and for general plant projects, $34,175,000.

AGREEMENT BETWEEN U.S. AND ITALIAN FIRMS: Agreement recently made by Babcock & Wilcox Co., New York, with Cantieri Riuniti Dell'Adriatico (United Shipyards of the Adriatic) will enable the Italian firm to build and sell merchant ships powered by nuclear propulsion plants based on B&W designs and patents. Under terms of the agreement, B&W will furnish technical assistance to CRDA for nuclear propelled ships for a ten year period from Jan. 1, 1960.

NEW PRODUCTS, PROCESSES, INSTRUMENTS...

NEW PRODUCTS: New low-cost "hot" loop (circulating distilled or demineralized water in a closed system) is now available from this manufacturer in a production model or to specifications. The apparatus, constructed to meet hydrostatic and production requirements of MIL-V-21127, uses 304 stainless steel for all flow media parts. The unit size is approximately 34" x 40" x 47" with automatic controls, recorders, and safety devices. --Associated Valve Co., West Walnut St., N. Wales, Pa.

PRODUCT NEWS: Carbon-14 labeled compounds prepared at Saclay, France, by staff of the Commissariat a l'Energie Atomique are now being distributed in the U.S. by New England Nuclear Corp., Boston, Mass. Compounds of greatest demand and of radiochemical stability are stocked by the firm for immediate delivery; delivery of other items is in 4 to 6 weeks.

A fully automatic monitor which it is claimed will record in 60 seconds a sudden increase in concentration of beryllium in the air has been developed by the chemistry division in Woolwich, London of Britain's Atomic Energy Research Establishment. The device photo-electrically measures the intensity of ultra-violet light obtained from a beryllium sample by subjecting it to an electric arc. Measurements can be made over a range of from 1 to 75 millionths of a gram per cubic meter.

Radioactive fall-out is measured continuously by the E. I. L. Gammagraph, manufactured by Electronic Instruments, Ltd., Richmond, Surrey, England. The instrument is said to be completely weatherproof and is offered for either interior or exterior use. Power requirements are 12 v. D.C.; a lead-acid storage battery may be used.

MANUFACTURERS' NEWS: Universal Transistor Products Corp., Westbury, L.I., has appointed Fred Israel Associates, Washington, D.C., as engineering sales representatives. The Washington firm will handle Universal's radiation detection instruments and power supplies.

MANUFACTURERS' LITERATURE: Atomlight, February 1960, issued by New England Nuclear Corp., Boston, Mass., may be obtained from the firm on request.....New brochure of Controlled Atmosphere Enclosures Manufacturing Co., Inc., Jacksonville, Fla., describes that firm's equipment for laboratory and plant work in the nuclear field.

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BIDS ASKED, CONTRACTS LET...

BIDS ASKED: Bids will shortly be asked by the USAEC's Albuquerque, N.M., operations office for construction of a second test cell at its Nevada test site for Project Rover. The new cell is for use in connection with static tests in the nuclear rocket propulsion program. To cost an estimated $8 million, completion is expected by 1961. (Air Products, Inc., Allentown, Pa., is architect-engineer for various facilities at this test site including the test cell, a hydrogen tank farm, etc.).....This USAEC office has also asked for bids for development of the White Rock area at Los Alamos Scientific Laboratory for private housing. The area, at one time a trailer camp for construction workers, is to be used for permanent housing for Los Alamos people. Land will be sold to the successful bidder at $25 per acre and he can choose from several locations in the 1000 acres of level land at the site.

CONTRACTS AWARDED: Year-long study of underwater conditions at two established radioactive waste disposal sites off the California coast will be made by Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, under recent contract award of the USAEC's San Francisco operations office, Oakland, Calif. The study will be made by Advanced Systems Development division of Cleveland Pneumatic. The older of the two disposal sites to be investigated is about 52 statute miles west of San Francisco. Since 1946, approximately 21,000 concrete-encased steel drums and 300 concrete boxes originally loaded with 14,000 curies of radioactivity have been deposited at the site. The other dumping ground is about 53 statute miles south of Santa Barbara. Since 1953, some 2,950 drums containing 60 curies of radioactivity have been deposited there. All disposals were made in over 1,000 fathoms or greater. Under its contract, Advanced Systems will make two oceanographic field surveys at each disposal site at six-month intervals. A feature of the work will be photographic exploration of a sizable portion of the ocean floor at each site to determine condition of the drums and to gain knowledge of marine life surrounding them.

On low bid of $4,871,000 among eight received, Henry G. Beck Co., Atlanta, Ga., has received contract from the USAEC's Oak Ridge Operations office to construct new facilities at Oak Ridge National Laboratory for the Metallurgy Division, the work of which includes fundamental and applied research in metals and ceramics, particularly in the areas of fuel element design and fabrication. Giffels & Vallet, Inc., Detroit, Mich., are architect-engineers on the job which provides for an addition to one building consisting of two floors and basement, and also a separate industrial type structure.

Two steam generators will be supplied by C. F. Braun & Co., Alhambra, Calif., for the experimental gas-cooled reactor now under construction at Oak Ridge National Laboratory. Braun will do the job under $677,200 subcontract received from H. K. Ferguson Co., prime construction contractor on the reactor project. The generators, essentially large tube and shell type heat exchangers, will produce steam at approximately 128,000 pounds per hour at full load. Design provides for the helium to flow to the shell side of the generators at 1040 deg. F. and 300 p.s.i. Water in the generator tube bundles is heated by the helium gas reactor coolant and converted to steam to drive a turbogenerator. Steam will be delivered to the turbogenerator at 1250 p.s.i. and 900 deg. F.

Nuclear division of The Martin Co., Baltimore, Md., has received USAEC contract valued at about $335,000 through November to develop series of computational codes for small pressurized water reactors. The work will be done by Martin's Nuclear Powerplant Department, the group which designed and constructed the PM-1 portable reactor system for the Army. Staff will select and develop reactor models and the associated codes which apply specifically to small, water-cooled, water-moderated reactor systems using highly-enriched fuel and enriched steel cladding. These types are of special interest to the Army's nuclear power program.

Allis-Chalmers Manufacturing Co., Milwaukee, Wisc. under recent USAEC contract award will build and install the power supply unit for the 12.5 billion electron volt synchrotron under construction at Argonne National Laboratory, Lemont, Ill. Known as the zero gradient proton synchrotron, the $29 million project is scheduled for completion in 1962.

ATOMIC ENERGY FINANCIAL NEWS...

STOCK OFFERING BY NUCLEAR FIRM: Nuclear Materials & Equipment Corp., Apollo, Pa., has asked Securities and Exchange Commission registration of 45,000 shares of its common stock. Some 40,020 are to be offered to the public through an underwriting group headed by Moore, Leonard & Lynch; the remaining 4,980 shares will be offered to holders of outstanding warrants. In addition to certain indebtedness, the company now has outstanding 23,746 shares of $10 par preferred stock and 187,355 common shares. Proceeds from sale of additional stock will be devoted to the company's $750,000 expansion program designed to increase production and fabrication facilities at its Apollo plant and to complete equipping of its new plutonium laboratory. Organized in December, 1956, Nuclear Material is engaged primarily in the production, fabrication and development of chemical, metallurgical and ceramic material for use in the manufacture and operation of nuclear reactors.

NEW REORGANIZATION PLAN FOR BANKRUPT INSTRUMENT MANUFACTURER: New plan for reorganization of El-Tronics, Inc. under Chapter 10 of the Bankruptcy Act, has been filed by J. J. McGinnis and G. P. Darrow, trustees. The company, which manufactures electronic and nuclear instruments, had filed petition for reorganization under the Bankruptcy Act on November 25, 1958. Under the trustees' proposal, El-Tronics would continue its present operations and, in addition, would purchase for $2 million the machinery and equipment of six companies controlled by Stuart J. Myers and associates of Warren, Pa. Mr. Myers, who is a creditor of El-Tronics (the company has frozen liabilities of $2,025,638) would own about 80% of stock, to be newly-issued, of El-Tronics. A hearing on the proposal will be held April 8 in Federal District Court, Philadelphia.

DECLINE IN SALES AND EARNINGS BY CHEMICAL PROCESSOR: Sharp decline in sales and earnings for all of 1959 as compared with 1958 has been reported by Foote Mineral Co., Philadelphia. For 1959, Foote reported earnings of $1,146,786 or 91¢ a share, compared with 1958 earnings of $2,144,362 or $1.72 a share. Sales of $20,171,859 during 1959 compared with $24,553,651 in sales the previous year. The expiration of the company's contract with the USAEC to supply lithium salts, plus the 116-day steel strike, were responsible for the fall-off in sales and earnings in the past year, according to Gordon H. Chambers, president. (In addition to producing lithium compounds, Foote supplies metallurgical manganese to the steel industry for use as an alloying material in production of stainless steels.)

STOCK CHANGES IN NUCLEAR FIRMS: Recent changes in stock holdings by officers and directors of firms in the nuclear field include sale of 3,900 shares of Nuclear Corp. of America by Andrew H. Bergenson, director, who reduced his holdings to 100. Alfred A. Michaud, vice-president, sold 500 shares, eliminating holdings.

ATOMIC ENERGY PATENT DIGEST...

PATENTS ISSUED March 1, 1960 to PRIVATE ORGANIZATIONS AND/OR INDIVIDUALS: (1) Process for recovery of uranium values. Ronald E. Stedman, inventor. No. 2,926,992 assigned to Imperial Chemical Industries, Ltd., London, England. (2) Process for the concentration of zirconia. Douglas W. Marshall, John J. Scott, inventors. No. 2,926,993 assigned to Norton Co., Worcester, Mass. (3) Process for the recovery of hydrogen which has been enriched in deuterium. Erwin W. A. Becker, Marburg (Lahn) Germany, inventor. No. 2,927,003 issued to inventor of record. (4) Electrorefining of zirconium. William W. Gullett, inventor. No. 2,927,067 assigned to Chicago Development Corp., Riverdale, Md.

PATENTS ISSUED March 1, 1960 to GOVERNMENTAL ORGANIZATIONS: (1) Production of ammonia and sulfur-bearing materials from ammonium sulfate. Robert F. McCullough, inventor. No. 2,927,001 assigned to USAEC. (2) Control limiter device. James A. de Shong, Jr., inventor. No. 2,927,070 assigned to USAEC. (3) Jacketed uranium nuclear reactor fuel element. William R. Huey, inventor. No. 2,927,071 assigned to USAEC. (4) Non-blocking stabilized feed back amplifier. Edward Fairstein, inventor. No. 2,927,165 assigned to USAEC. (5) Pulse height analyzer. Marcel Fiehrer, Alix Pages, inventors. No. 2,927,207 assigned to Commissariat a l'Energie Atomique, Paris, France. (6) Calutron receiver adjustment support. Richard C. Cunningham, Alvin W. Ogg, inventors. No. 2,927,208 assigned to USAEC. (7) High speed photographic apparatus. Lloyd W. Allen, Rudolph W. Buntenbach, inventors. No. 2,927,215 assigned to USAEC. (8) Intense energetic gas discharge. John S. Luce, inventor. No. 2,927,232 assigned to USAEC.

MEETINGS, COURSES, CONFERENCES...

EXPOSITION: Over 141 companies have made arrangements to exhibit their products and services at the 1960 Atomic Exposition being held April 4-7 in New York. Government agencies and industrial firms from France, Switzerland, Canada and the U. S. will be represented. The exposition will be in conjunction with the 6th Nuclear Congress sponsored by 28 scientific, management and technical organizations. Information on the Exposition may be obtained from International Atomic Exposition, 310 Architects Bldg., Phila. 3, Pa. Details of the Nuclear Congress, which will include a series of reports, papers and discussions on a wide variety of subjects related to nuclear energy, may be obtained from Clarke Williams, nuclear engineering department, Brookhaven National Laboratory, Upton, N.Y. Dr. Williams is chairman of the Congress.

MEETINGS: National Aeronautic Meeting of the Society of Automotive Engineers, scheduled for April 4-8, 1960 in New York, will hear a number of papers on subjects related to nuclear energy applications. The papers may be obtained from SAE, 485 Lexington Ave., New York 17 at prices the Society will advise; they should be identified by number: A Reactor Powered Turboelectric Generator for Space Vehicles, SNAP-2, will be presented by G. M. Anderson (No. 154-B); Nuclear Space Vehicles Using Pebble Bed Reactors, by M. M. Levoy, J. J. Newgard (No. 165-B); Nuclear Rockets for Lifting Manned Stations into Space, by H. F. Crouch (No. 167-A); Choice of Engine Type for Nuclear-Powered Multi-Purpose Aircraft, by D. P. Lalor, W. C. Schmill (No. 167-B); Some Practical Methods for Fabricating Shields for Nuclear-Powered Aircraft, by W. Q. Hullings, J. L. McDaniel (No. 167-C); The Nuclear-Powered Airship, by L. Jurich (No. 169-A); Potential of Nuclear-Powered Commercial Cargo, by J. F. Brady, Jr. (No. 169-B); and Flight Reliability in Nuclear Aircraft, by L. W. Credit (No. 169-C)

CONFERENCES: Two sessions on nuclear power plants at the American Power Conference, Chicago, March 29-31, 1960 will cover (1) progress and economics and (2) concepts and applications. Details may be obtained from E. R. Whitehead, Illinois Institute of Technology, Chicago 16 which is sponsoring the conference in conjunction with several universities and engineering societies.

SYMPOSIA: Technical symposium on electron-bombardment processes is scheduled for March 24-25, 1960 in Boston under sponsorship of The Alloyd Corp., Cambridge, Mass. Registration information may be obtained from James S. Hetherington of Alloyd.

A one day symposium on Radioactive Fallout in Relation to Foods is scheduled for the 137th National Meeting of the American Chemical Society, April 5-14, 1960 in Cleveland. Full details may be obtained from the ACS, 1155 Sixteenth St., N. W., Wash. 6, D. C.

NEW BOOKS & OTHER PUBLICATIONS...

Power Cost Normalization Studies, Civilian Power Reactor Program-1959. Study made for the USAEC by Sargent & Lundy. No. SL-1674 consists of 164-pages of text and 102 two-page engineering drawings related to cost estimates for eight nuclear power reactor concepts. -- Office of Technical Services, Wash. 25, D. C. ($2.50)

NOTES: Scientific Research in Great Britain is a 285-page report prepared by the Legislative Reference Service of the Library of Congress for the Joint Congressional Committee on Atomic Energy. It may be obtained free of charge from the JCAE, Congressional Office Building, Wash. 25, D. C.

New edition of Atomic Energy Commission Research Reports lists about 5000 reports in the Office of Technical Services' collection of documents acquired to January 1960. It is available free of charge as List No. 33 from Office of Technical Services, Wash. 25, D. C.

Survey of Industrial Requirements for General Testing Reactors for the Period 1960 Through 1965 is a review recently made by the USAEC. The report may be obtained free of charge from Division of Reactor Development, USAEC, Wash. 25, D.C.

Sincerely,

The Staff
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